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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,787	10/29/2003	Nancy Anne Federspiel	6616-72707-02	1171

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EXAMINER

IBRAHIM, MEDINA AHMED

ART UNIT	PAPER NUMBER
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1638

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/697,787	Applicant(s) FEDERSPIEL ET AL.	
	Examiner Medina A. Ibrahim	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2006.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
 4a) Of the above claim(s) 4 and 8-10 is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-3, 5-7 and 12 is/are rejected.
 7) ☒ Claim(s) 11 is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Applicant's response filed 09/07/06 in reply to the Office action of 04/07/06 has been entered. Claims 1, 3, and 5-7 are amended. Claims 4 and 8-10 are withdrawn from consideration as being directed to the non-elected invention. Claims 1-3, 5-7 and newly added claims 11-12 are under consideration.

The declaration under 1.132 of John Davis has been considered.

All previous objections and rejections not set forth below have been withdrawn in view of Applicant's amendment.

Claim Rejections - 35 USC § 112

Claims 1-3 and 5-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This rejection is repeated for the reasons of record as set forth in the last Office action of 04/07/06. Applicant's arguments filed 09/07/06 have been fully considered but are not deemed persuasive.

Applicant argues that the claims are now amended to recite orthologs having at least 60% sequence identity to SEQ ID NO:2 and comprising SANT DNA-binding domain and having pathogen and drought resistance phenotype. Applicant also argues that the orthologs of SEQ ID NO: 2 are described in the specification as being

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functionally active sequences having pathogen and drought resistance activity; having the ability to rescue defective endogenous PRDT1 polypeptides; and some having DNA-binding activity. Applicant further argues that the functional domains of the PRDT1 polypeptides include SANT domain which specifically recognizes YAAC (G/C) G, and that the SANT domain was well known in the art at the time of filing this application. Applicant refers to Aasland et al (1996, Trends Biochem. Sci. 21:87-88) and the declaration of John Davis to support this position.

These are not found persuasive for the following reasons: firstly, the orthologs that are described in the specification as being functionally drought and/or disease resistant and comprising SANT domain are all from a single plant species, namely *Arabidopsis thaliana*. Secondly, there is no evidence that the SANT DNA binding domain is responsible for the PRDT1 function, given that some, but not all, of the disclosed orthologs possess DNA binding activity and given that not all have shown both pathogen resistance and disease resistance activity (see paragraph 9 of the declaration of John Davis). Thirdly, while the prior art teaches SANT DNA binding domains, the prior art does not describe structure-function relationship for these domains. Fourthly, while the specification discloses non-*Arabidopsis* sequences from other plant species, there is no evidence that the sequences share at least 60% sequence identity to SEQ ID NO: 2, comprise SANT DNA binding domain, and possess PRDT1 activity. Therefore, for all the reasons given above and in the last Office action, Applicant has not described a representative number of nucleic acids that falls within

scope of the genus claimed. Consequently, transgenic plants and methods that employ the nucleic acids are similarly not described.

The declaration under 1.132 of Dr. John David is persuasive regarding the PRDT1 function by the *Arabidopsis* sequences that are orthologs of SEQ ID NO: 2. The declaration is not persuasive regarding the adequate written description of the broad scope of the claims encompassing transgenic plants comprising other orthologs from any source having at least at least 60% sequence identity to SEQ ID NO: 2, comprising SANT DNA binding domain, and possessing PRDT1 activity. The data provided in the declaration is only for ortholog genes from *Arabidopsis thaliana*, and the rejected claims require the use of ortholog genes from any source having at least 60% sequence identity to SEQ ID NO: 2, comprising SANT DNA binding domain, and possessing PRDT1 activity; such broadly claimed ortholog genes are neither described in the specification nor are known in the prior art. In addition, the sequence search results of the disclosed sequences didn't reveal any significant similarity with a known SANT protein. Therefore, the declaration is not persuasive regarding the adequate written description of the broad scope of the claims.

Therefore, weighing all factors above and in the last Office action, the claimed invention does not meet the current written description requirements.

An amendment to claim 1 to delete part (c), and to claim 5 to delete the sentence "or an ortholog thereof.....and has DNA binding activity" in part (a), would obviate the above rejection .

Remarks

The Claims are deemed free of the prior art.

Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

No claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Medina A. Ibrahim whose telephone number is (571) 272-0797. The Examiner can normally be reached Monday -Thursday from 8:00AM to 5:30PM and every other Friday from 9:00AM to 5:00 PM. Before and after final responses should be directed to fax nos. (703) 872-9306 and (703) 872-9307, respectively.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Anne Marie Grunberg, can be reached at (571) 272-0975.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

11/21/06

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MEDINA A. IBRAHIM
PRIMARY EXAMINER
